UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,164	12/02/2003	Simon Robert Walmsley	PEA19US	6693

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EXAMINER
POWERS, WILLIAM S

ART UNIT	PAPER NUMBER
2134	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/727,164	WALMSLEY, SIMON ROBERT
	Examiner	Art Unit	
	William S. Powers	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 August 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.

    4a) Of the above claim(s) <u>1 and 11-14</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) <u>2-10 and 15-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>05 May 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1.   Applicant's election of claims 2-10 and 15-18 in the reply filed on

8/22/2007 is acknowledged. Because applicant did not distinctly and specifically

point out the supposed errors in the restriction requirement, the election has

been treated as an election without traverse (MPEP § 818.03(a)).

Specification

2.   The disclosure is objected to because of the following informalities: figures

are referenced in paragraphs 2675, 3413, 3538, 3606 and 3831, but the figure

numbers are absent.

Appropriate correction is required.

3.   The lengthy specification has not been checked to the extent necessary to

determine the presence of all possible minor errors. Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the

specification.

Claim Objections

4.   Claim 16 is objected to because of the following informality: there is no

article in front of the phrase "printer controller". Appropriate correction is

required.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6.   Claims 2-10 and 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 2-10 and 15-18, it is not clear what significance the limitations of the first and second messages and the two security fields have to the invention of the instant application. The limitations seem to be only concerned with the first and second message and not any other subsequent messages. As such, the aforementioned limitations amount to non-functional descriptive material. Due to the voluminous Specification and Drawings, the Examiner suggests that the Applicant to point out references in the Specification and the Drawings that the claims are drawn from and to explicitly state the functionality of the first and second messages and the first and second security fields. Additionally, it is not clear why the second message is treated differently than the first. Claims 5-8 detail limitations directed to ensuring the delivery of the second message, but these limitations do not apply to the first message. Is something done to the first or second message such that, the limitations only apply to the second message?

As to claim 2, it is not clear how the second message prevents the first message from updating the security fields. The first message prevents the updating of the security fields by the second message. How can the second message update the security fields when it is sent after the first message, which prevents the security fields from being updated? Is the first message re-sent after the second message? If a third message is sent to the target entity, would it be prevented from updating the security fields? The claim, as written, seems to have the write restrictions only apply to the first and second message.

As to claim 3, it is unclear what the Applicant means by the term "mutually incompatible". Are the security values incompatible if they are not equal or are the security values incompatible only when the first attempted write is applied to the security fields? In addition, what are the conditions that would disable a security field from being written too? It is also unclear if the term "the fields" in line 11 only refers to the security fields or to the security and data fields of the claim. Additionally, it is not clear how a second attempted write can "prevent subsequent application of an earlier attempted write to a data field". It appears that the first attempted write was communicated before the method steps of the claim and also unsuccessful, but the first attempted write could be carried out at a later time after application of the third and fourth security values provided that all security fields can be written to.

As to claim 4, it is unclear how the method "prevent[s] the first write from subsequently being performed in the event that the second write is performed". Is the first write command re-issued or on some kind of time delay? According to the claim language, the only way the second write can be performed is if the first write is not performed, so if the second write is performed that means the first write was not performed. Does this mean *any* subsequent writes will be prevented from being performed?

As to claim 8, the limitations of the claim are unclear. The double conjunction "and/or" in line 2 of the claim introduces indefiniteness into the limitations because it is not clear if the second write has to be successfully received and successfully performed or if only one of these actions need to happen to satisfy the limitations of the claim. The limitations also set up an infinite loop according to claim 3. If the second write is sent to write to two security fields and "if any of the fields cannot be written to, none are written to", the method requires the second attempted write to be sent until the write commands are executed, which they will not be "if any of the fields cannot be written to".

As to claim 9, it is not clear from the claim language or the specification what criterion is used to verify that the second write was successful. An authenticated read of the security fields is specified, but there appears to be nothing else required to determine that the second write occurred. There is no

checking if a write restriction has been enabled, or a comparison of the security

fields before and after the second write is sent.

As to claim 10, it is not clear if there is supposed to be a data field value in

the second message. There is a data field value in the first message, but the

second message only includes a 3rd and 4th value for the security fields.

As to claim 17, the limitations of the claim contradict the limitations of

claim 16. For purposes of examination, the Examiner assumes that the first line

of the claim reads "wherein the first integrated circuit is installed in a cartridge".

Claim Rejections - 35 USC § 102

7.   The Examiner has stated the below column and line numbers as

examples. All columns and line numbers in the reference and the figures are

relevant material and Applicant should be taken the entire reference into

consideration upon the reply to this Office Action.

8.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section
122(b), by another filed in the United States before the invention by the applicant for patent or
(2) a patent granted on an application for patent by another filed in the United States before
the invention by the applicant for patent, except that an international application filed under
the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an

application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9.   Claims 2-4 and 15-18 are rejected under 35 U.S.C. 102(e) as being

anticipated by US Patent No. 7,031,012 to Serizawa:

As to claim 2 as best understood, Serizawa teaches:

a.   Sending a first message to the target entity, the first message being

configured to cause the entity to perform an action and to update the first

and second security fields (the amount of toner is written to address No. 5

(an action), service life expiration is written to address No. 6 and a

memory lock is written to address No. 8 (security fields)) (Serizawa,

column 7, lines 19-28).

b.   Sending a second message to the target entity, the second

message being configured to cause the entity to update the first and

second security fields (once a memory lock has occurred, any subsequent

command or message to write to the memory is prohibited) (Serizawa,

column 7, lines 1-9).

c.   Wherein in the security field have write restrictions associated with

them such that updating the security fields in accordance with the first

message prevents subsequent updating of the security fields in

accordance with the second message , and wherein updating the security

fields in accordance with the second message prevents subsequent

updating of the security fields with the first message, and wherein the first

action is only performed when updating the security fields by the first message is successful (Serizawa, column 7, lines 1-29).

As to claim 3 as best understood, Serizawa teaches:

a. Each of the first and second security fields has a monotonically changeable write restriction associated with it (address Nos. 7 and 8 have write restrictions associated with them) (Serizawa, column 6, lines 9-21).

b. The first attempted write included a first data value for the data field and first and second security values for the first and second security fields respectively (commands include the amount of toner left in cartridge and the service life of the cartridge) (Serizawa, column 6, lines 27-40).

c. The method including the step of sending a second write to the target entity, the second write including third and fourth security values for the first and second security fields respectively, wherein the write restrictions are such that application of the third and fourth security values to the first and second fields are mutually incompatible with application of the first and second security values to the first and second security fields, such that if any of the fields cannot be written to, none of them are written to (once a memory lock has occurred, any subsequent command or message to write to the memory is prohibited) (Serizawa, column 7, lines 1-29).

As to claim 4 as best understood, Serizawa teaches:

a.   Prevent the second write from being performed if the event that the

first write was previously performed (once a memory lock has occurred,

any subsequent command or message to write to the memory is

prohibited) (Serizawa, column 7, lines 1-29).

b.   Prevent the first write from subsequently being performed in the

event that the second write is performed (once a memory lock has

occurred, any subsequent command or message to write to the memory is

prohibited) (Serizawa, column 7, lines 1-29).

As to claim 15 as best understood, Serizawa teaches the target entity is a

first integrated circuit and the messages are sent by a second integrated circuit

(printer engine controller and non-volatile memory on toner cartridge) (Serizawa,

column 4, line 66-column 5, line 44).

As to claim 16 as best understood, Serizawa teaches the second

integrated circuit is a printer controller (engine controller) ((Serizawa, column 4,

line 66-column 5, line 44).

As to claim 17 as best understood, Serizawa teaches the second first

integrated circuit is installed in a cartridge that is releasably attachable to a

printer in which the printer controller is installed, such that the messages can be

sent via a communications link between the printer controller and cartridge (the

toner cartridge has a non-volatile memory that is in communication with the

printer engine controller) (Serizawa, column 4, line 66-column 5, line 44).

As to claim 18 as best understood, Serizawa the data field stores an

indicator of ink remaining in the cartridge (non-volatile memory of the toner

cartridge has (Serizawa, column 4, line 66-column 5, line 44).

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1,

148 USPQ 459 (1966), that are applied for establishing a background for

determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at
          issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating
          obviousness or nonobviousness.

12.   This application currently names joint inventors. In considering

patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that

the subject matter of the various claims was commonly owned at the time any

inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

and invention dates of each claim that was not commonly owned at the time a

later invention was made in order for the examiner to consider the applicability of

35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35

U.S.C. 103(a).

13.   Claims 5-8 and 10 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US Patent No. 7,031,012 to Serizawa.

As to claims 5-8 as best understood, Serizawa does not expressly

mention the limitations of the claims. However, Office Notice is taken that is old

and well known in the art for the limitations of claims 5-8 (notification that an

action was not successful, notification of an undelivered message, resending a

message when notification is not received that a previous message was

received) are used in reliable message communication systems to ensure

messages are sent and received accurately as exemplified in at least US Patent

No. 5,315,635 to Kane et al.

As to claim 10 as best understood, Serizawa teaches updating a value

related to the data field (service life of toner cartridge is updated) (Serizawa,

column 7, lines 1-29).

14.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over US

Patent No. 7,031,012 to Serizawa as applied to claim 6 above, and further in

view of US Patent No. 6,217,165 to Silverbrook.

As to claim 9 as best understood, Serizawa does not expressly mention

performing an authenticated read. However, in an analogous art, Silverbrook

teaches the step of verifying the successful second write by performing an

authenticated read of the first and second security fields (Silverbrook, column

190, lines 18-24).

Therefore, one of ordinary skill in the art at the time the invention was

made would have been motivated to implement the printer control system of

Serizawa with the authenticated read of Silverbrook in order to a have secure

write command as suggested by Silverbrook (Silverbrook, column 190, lines 18-

24).

Conclusion

Any inquiry concerning this communication or earlier communications from

the examiner should be directed to William S. Powers whose telephone number

is 751 272 8573. The examiner can normally be reached on m-f 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Kambiz Zand can be reached on 571 272 3811. The fax

phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public

PAIR. Status information for unpublished applications is available through

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free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

William S. Powers
Examiner
Art Unit 2134

KAMBIZ ZAND
SUPERVISORY PATENT EXAMINER

11/8/2007